

ABSTRACT

A small size and high efficiency laser oscillation apparatus capable of obtaining high output and high beam quality laser light is provided. First waveguide (21) (refractive index= n_1) for transmitting excitation light, second waveguide (22) composed of core (23) (refractive index= n_3) for generating laser light and clad (24) (refractive index= n_2) for transmitting the excitation light, and third waveguide (25) (refractive index= n_4) including first waveguide 21 and second waveguide 22 are provided. Light amplifying fiber (20), in which the refractive indices are set so as to satisfy the relation: $n_1 < n_4 < n_2 < n_3$, is used and excised by semiconductor lasers (10a) and (10b).